

The modern era of Formula One Grand Prix racing began in 1950, but the roots of F1 are far earlier, tracing to the pioneering road races in France in the 1890s, through the Edwardian years, the bleak twenties, the German domination of the 1930s and the early post-war years of Italian supremacy.

At the birth of racing, cars were upright and heavy, roads were tarred sand or wood, reliability was problematic, drivers were accompanied by mechanics, and races — usually on public roads from town to town — were impossibly long by modern standards. Regarded as the first motor race proper was a 1,200 km road race from Paris to Bordeaux and back in 1895, won by **Émile Levassor** with his **Panhard** et Levassor in 48 hours. One of the most successful drivers of the early years was Fernand Charron, who won the Paris-Bordeaux race in 1899, also in a Panhard, at the blazing average speed of 29.9 mph.



The first race using the appellation "**Grand Prix**" was 1901's French Grand Prix at Le Mans, won by Ferencz Sisz with a **Renault**, who covered the 700 miles at 63.0 mph. In 1908 the Targa Florio in Sicily saw the appearance of "**pits**," shallow emplacements dug by the side of the track where mechanics could labor with the detachable rims on early GP car tires — themselves a major technical improvement over the earlier technique of permanently attached wheels and spokes. But even so, racing cars of the early years were too heavy and fast for their tires; Christian Lauteschalnger's winning **Mercedes** shredded 10 tires in the 1908 French Grand Prix at Dieppe!

In 1914, the massive 4 1/2 litre Mercedes of **Daimler-Benz** dominated the French Grand Prix at Lyons — 20 laps of a 23.3 mile circuit — taking the first three places and introducing control of drivers by signal from the pits. During World War I, racing was halted in Europe, and many drivers participated in the U.S. Indianapolis 500. **Enzo Ferrari** — who's real fame was to follow as a team manager and manufacturer with Scuderia Ferrari, formed in 1929 to race Alfa Romeo P2s — finished second in the 1920 *Voiturette* race at **Le Mans**, the first international road race in France in six years.

“ By tradition the Italian racing driver in action is an excitable character given to shouting, gesticulating, waving his fists, baring his teeth and in general giving way to his emotions. Tazio Nuvolari filled this role splendidly.”

The Farmer's Son - Cyril Posthumus

The first (and, until **Dan Gurney's** Eagle-Weslake at **Spa-Francorchamps** in 1967, the only) Grand Prix victory by an American-built car was by Jimmy Murphy in the 1921 French Grand Prix at Le Mans, driving a **Duesenberg**. Among the best of the 1920s

manufacturers were **Bugatti**, whose straight-eight Type 35Bs won the French and Spanish GPs in 1929 and the **Monaco**, French and Belgian GPs in 1930, and **Fiat**, which introduced the **supercharger** for the first time in 1923.

The Great Depression of the early 1930s led to a lack of money and interest in Grand Prix racing, but saw the emergence of the legendary **Tazio Nuvolari**, whose wins in the Alfa Romeo P3 "Monza" in the **Mille Miglia**, at Monaco and the Italian GP at **Monza** were stunning. His victory in the 1933 Monaco GP was the first in



which starting grid positions were determined by qualifying times. But in 1934, the balance of power in racing would begin to shift from Italy to Germany, with the emergence of factory teams from **Auto Union** (now Audi) and **Mercedes-Benz**, behind massive financial support from the Third Reich government on orders from Adolph Hitler.



These powerful and beautiful German machines introduced **aerodynamics** into Grand Prix car design and ran on exotic, secret fuel brews. Driving the sleek, silver 3-litre V12 Auto Union in his trademark canary yellow jersey, Nuvolari achieved new greatness with these incredibly well-engineered automobiles — but nothing to top his 1935 German GP victory at the **Nürburgring**, where he defeated nine modern German cars in a four-year old Alfa Roméo.

Motor racing after World War II initiated a new formula — originally called Formula A but soon to be known as **Formula 1** — for cars of 1,500 cc supercharged and 4,500 cc



unsupercharged. The minimum race distance was reduced from 500 km (311 miles) to 300 km (186 miles), allowing the Monaco Grand Prix to be re-introduced after a two-year interval in 1950.

The **FIA (Federation Internationale de**

L'Automobile) announced plans for a World Championship at a

meeting held that year. On 10 April 1950, **Juan Manuel Fangio**, in a Maserati, won the Pau Grand Prix, the first contest to be labeled an "International Formula One" race. A month later **Silverstone** hosted the British Grand Prix, the first sanctioned championship race for Formula One Grand Prix cars, and the F1 World Championship was born!

Winner at Silverstone in 1950 — adding the pole and fast lap in the process — and the first F1 champion, **Giuseppe ("Nino") Farina** drove an Alfa Roméo 158, capturing the Belgium, Swiss and Italian races as well, along with non-championship wins at Bari and Donnington. Farina, who topped **Juan Manuel Fangio** by three points in the 1950 season, is best remembered for his style of driving; the relaxed, inclined position and outstretched arms that was to influence a whole generation of drivers. Even in post-war days, many of his contemporaries still sat crouched, fighting with the wheel. Leaving for **Ferrari** in



1951, for the next two seasons Farina fought a personal battle with **Alberto Ascari**, a battle he was bound to lose, for Ascari was by far the better driver; more controlled, faster and more precise. Ascari won the F1 championship in 1952-53 in the Ferrari 500.

But it is Fangio, from Argentina, who epitomizes the first decade of Formula One, winning five World Championships for five different manufacturers and four consecutively from 1954-57. When **Mercedes** withdrew from motor racing after the horrific, multi-car accident (which Fangio barely escaped) at the 1955 Le Mans 24 Hours that left 85 people dead, Fangio moved on to Ferrari (racing **Lancias** for a year), winning in 1956 with five poles, three wins and one 2nd in seven races.

“Nürburgring was my favourite track. I fell totally in love with it and I believe that on that day in 1957 I finally managed to master it. It was as if I had screwed all the secrets out of it and got to know it once and for all. . . For two days I couldn't sleep, still making those leaps in the dark on those curves where I had never before had the courage to push things so far.”

— *Juan Manuel Fangio* —

Perhaps Fangio's greatest race was the 1957 German GP at the Nürburgring. Driving a **Maserati** 250F, he lost 56 seconds and the lead in a pit stop, but returned to win by letting loose the most spectacular pursuit of his life, bettering the track record for the 14.2 mile **Nordeschlifer** ("North Ring") by an amazing 12 seconds on three consecutive laps.



Fangio's rival, erstwhile teammate and admirer was **Stirling Moss** — perhaps the greatest F1 driver never to win a championship — who finished second to Fangio at Mercedes in 1955 in the famous covered-wheel "**Silver Arrows**," with Maserati in '56 and then again with Vanwall in '57. Moss became the first Briton to win the British Grand Prix, at **Aintree** in 1955, and the first to do so in a British car, the 1957 **Vanwall** VW5. His career declined, leading to retirement, following accidents during the 1960 Belgium Grand Prix at **Spa-Francorchamps**, where Moss was thrown from the car, breaking both legs, after a rear axle broke at over 130 mph, and an even worse shunt at **Goodwood** in 1962.

Despite Moss's mid-1950s heroics, the British era really began in 1958, when **Mike Hawthorn** captured the F1 championship driving the Ferrari 246 — after the death of fellow Brit Peter Collins in the French GP at Reims — and Moss once again finished second in the Vanwall (designed by **Colin Chapman**). Disenchanted and distraught by

Ferrari politics, Hawthorn — the first British World Champion — retired at season end, only to be killed just months later in a road accident in his Jaguar in January 1959.



Vanwall withdrew from F1, but its place were to come a series of dominant British Grand Prix teams, making **British racing green** the "official" color of F1 for a more than a decade — and ushering in an era of British F1 engineering



excellence that extends to today. Between 1962 and 1973, British F1 teams won 12 World Championships with drivers the likes of Scots Jim Clark and Jackie Stewart, Australian Jack Brabham, Englishman Graham Hill and New Zealander Denny Hulme. It all started in 1959-60 with the **Cooper** team, using a 2,500 cc Coventry Climax engine and a revolutionary **rear-engine** design that captured back-to-back F1 titles for **Jack Brabham** with a combination of superb weight distribution and handling. (Driving a "works" Cooper along with Brabham to second place in the 1960 World Championship was young New Zealander **Bruce McLaren** — whose real fame, like Enzo Ferrari, came later as a team owner.)

Yet it was Colin Chapman's **Team Lotus**, pushed by his technical brilliance, which dominated the second decade of Formula One. Beginning in 1960 with Moss and Innes Ireland, Lotus thrived on the extraordinary relationship between Chapman and his prodigy driver, **Jim Clark**, who was to make the most of Lotus' technical advances for F1 cars. The most important of these was the **monocoque** (or one-piece) chassis, introduced with the Lotus 25 in 1962, which along with rear engines marked the second watershed technological change in Formula One.

“We must picture it as best we can: the low, low Lotus 25, Clark’s hands encased in black driving gloves and holding the wheel with such sensitivity, such lightness of touch. Jim Clark did not beat the Nürburgring into submission. He caressed it into surrender, seduced from it every secret it had.”

Grand Prix Showdown - Christopher Hilton

After an initial controversy at **Monza** in 1961, where he was involved in an accident that claimed the life of Wolfgang ("Taffy") von Trips, giving the World Championship to American **Phil Hill** and his famous shark-nosed Ferrari 156, Clark barely lost the 1962 title to **Graham Hill** (then driving for **BRM** — "British Racing Motors") when an oil leak caused a DNF while leading the final race (and the season points) at **Kyalami**. He won handily in 1963, and repeated in 1965, taking the maximum possible championship points in both seasons. All this despite taking May



off each year, and missing Monaco, to compete in and become the first Briton to win the **Indianapolis 500**. The Lotus string was broken only by John Surtees in the 1964 Ferrari 158 (it would be 11 years before the Maranello team would win another F1 title), and Jack Brabham's new **Team Brabham**, which won in 1966-67 while Lotus struggled with the new, increased 3.0 litre engine specification for F1.

Jimmy Clark may have been the most naturally talented driver ever to appear in Formula One. He won four straight Belgian GPs at the tremendously difficult **Spa-**



Francorchamps circuit, a track he despised, and was masterful in wet conditions. His dominant 1965 season in the Lotus 33 — in which he led every lap of every race he finished — is matched in F1 history perhaps only by the spectacular 1988 results of Alain Prost and Ayrton Senna at Team McLaren. Clark broke the legendary Fangio's record for career victories in the opening race of the 1968 season in South Africa, but died just months later at **Hockenheim** in an F2 race after crashing into the trees in the rain on 7 April. A small plaque — now located behind a protective Armco guardrail — is set in the forest to mark the spot of his tragic, and still unexplained, accident.

The British era continued after Jim Clark's death. **Graham Hill** took the 1968 title in the Lotus 49, fitted with the then-new **Ford Cosworth** engine, introduced at the Dutch Grand Prix in June 1967, and with the first sponsorship colors and logos seen in F1 racing. But the mantle of champion would soon pass to Clark's close friend, fellow Scotsman and protégé **Jackie Stewart** — Clark arranged for Stewart's first F1 test drive — who would surpass Clark's career record for GP wins and capture three World Championships between 1969 and 1973.



Formula One technology developed at a furious pace in the 1970s and early 1980s, beginning with the introduction of **wings** (or "aerofoils") mid-way during the 1968 season. Borrowed from Jim Hall's revolutionary Can-Am **Chaparral**, wings allowed for the creation of "**downforce**," pinning cars to the track for greater traction and vastly increased cornering speed. Starting precariously — the original high-mounted, manually adjustable rear wings tended to fall off, causing tremendous shunts — F1 **aerodynamic engineering** proceeded in fits and starts. Jackie Oliver's practice crash in the Lotus 49B at Rouen in July 1968, followed by disastrous accidents for both Graham Hill and Jochen Rindt during the 1969 Spanish GP at **Montjuich Park**, caused wings to be banned for Monaco and the balance of the championship that year.

Jackie Stewart's finest victory may have been in the 1968 German GP at the Nürburgring, where in the mist and torrential rain he outpaced the field to win by just over four minutes from Hill. The 1969 season belonged to Stewart and his team owner, **Ken Tyrrell**, who dominated F1 with their **Matra** MS80, winning at Kyalami, Montjuich, **Zandvoort**, **Clermont-Ferrand**, Silverstone and Monza — although Graham

Hill captured his 5th Monaco Grand Prix. Lotus returned in force in 1970, a season which was all about the brilliance of Austrian **Jochen Rindt** with the new Lotus 72 (taking the laurels in Monaco, Holland, France, Britain and Germany) and was overshadowed by Rindt's horrific death in practice for the Italian Grand Prix at Monza's infamous **Parabolica** corner.

“ At Monza, Stewart was in the act of buckling his helmet when he broke down, wept in a corner, did get into the car, wept again. He could taste the salt of his own tears. Out there as he circled Monza's broad acres he became a racing driver again. He spent a few laps examining the Parabolica, searching for clues as to what might have happened — then drove the fastest lap he had ever driven at Monza. ”

Grand Prix Showdown - Christopher Hilton

Although the Cosworth engine was by now ubiquitous in F1, the Lotus 72 — with its distinctive "shovel" nose and nose wings — was significantly faster. Rindt won the 1970 championship posthumously, and his replacement as number one driver for Lotus, young Brazilian **Emerson Fittipaldi**, piloted the 72 to his first F1 win at the season-ending U.S. Grand Prix at **Watkins Glen**. Stewart and Fittipaldi then split the next four World Championships, with Stewart taking 1971 and 1973 for the new **Team Tyrrell**,



sponsored by Elf, and Fittipaldi winning with the black "John Player Special" Lotus in 1972 and giving **Team McLaren** its first F1 title in 1974. (Bruce McLaren had died, after winning four GPs, including Belgium in 1968 in his own car, during Can-

Am testing at Goodwood in 1970.) Stewart retired at Watkins Glen in 1973, one race short of 100 GPs, withdrawing from the contest after the death in practice of **Francois Cevert**, his friend and protégé at Tyrrell.



Rising once again after Stewart's retirement, Ferrari returned to the forefront of F1 in 1975 with the flat-12 powered 312T and drivers **Niki Lauda** and **Clay Regazzoni**. Despite a season marred by protests and concerns about driver safety — Fittipaldi refused to drive in the Spanish GP, which was stopped after 29 laps when a car launched into the crowd, killing four spectators — Lauda took nine poles and won five races to capture his first of three F1 crowns. Formula One cars now sported huge **airboxes** behind the cockpits to increase air flow to the engine, leading the way (after a short experiment with the famous **six-wheel Tyrrell P34**, which was a front-runner throughout 1976) to the next major technical revolution in F1: **ground effects**.

But another mention of **Niki Lauda**, one that illustrates the savagery and heroism of F1, is required before ground effects can properly be explored.



Coming off his championship, Lauda battled with **James Hunt** (driving the McLaren M23 Cosworth) to win six of the first nine races of the 1976 season. But at the German Grand Prix on 1 August, Lauda crashed his Ferrari at *Bergwerk*, a 150 mph section of the Nürburgring, in a massive, flaming accident that still brings shivers when viewed to this day. Suffering severe facial burns and inhaling toxic fumes from the car's burning bodywork, Lauda was expected to die and received the **Last Rites** in the hospital, but in a rare display of sheer determination, made a near-miraculous recovery to return to the cockpit just six weeks later for the Italian GP, where he finished 4th. (The Nürburgring's famous Nordeschlifer was retired as the home of the German GP — the jumps and twists deemed too unsafe for F1 cars — and moved to **Hockenheim** the next year, reincarnated only in shortened, sanitized form 20 years later as the Luxembourg GP.)

“Fuji was drawn in another dimension: a widespread disbelief that Lauda was actually alive, never mind driving his Ferrari. . . After three laps Lauda prised himself out of the cockpit and as he walked away from the mechanics someone put a comforting arm round his shoulders. But Niki Lauda needed no comfort from another man; he alone would live with his decision.”

Grand Prix Showdown - Christopher Hilton

After several victories by Hunt at **Mosport** and Watkins Glen, the 1976 Formula One season went down to the last race, at **Fuji** in Japan. Leading the World Championship by three points, Lauda withdrew from the race after three laps of torrential rain, giving the championship to "**Master James**," Britain's last F1 champion for 16 years, who nursed his rain tires until a late-race pit stop and finished the race, unable to see the track, not knowing where he had placed or whether he had won the title. Lauda re-captured the title with Ferrari in 1977, but quit the team with two races to go, following a calculated 4th place championship-clincher at the U.S. Grand Prix, to join **Bernie Ecclestone's** Parmalat Brabham team — and be replaced in the **Ferrari** by **Gilles Villeneuve**.

Formula one engineers, now referred to as "designers," had been steadily working on aerodynamics for more than a decade. The zenith of the art may have been reached in

1978 with the "**ground effects**" Lotus 78/79. Ground effects turned the entire car into a large, inverted wing, using side skirts and underbody design to literally glue the car to the circuit. **Mario Andretti**, who took the Lotus to the championship in 1978, explained that ground effects made the race car "feel like it's painted to the road." **Colin Chapman's** careful development of the ground-effect car principle had rendered conventional GP machines virtually uncompetitive in a little over 12 months, as Lotus won nine of the 15 races in the '78 season. (Andretti's own championship winning race was marred by the death of team mate **Ronnie Peterson** at the start of the Italian Grand Prix at Monza, an accident for which then second-year driver **Ricardo Patrese** was sanctioned but eventually absolved.) Yet the other teams would catch up shortly, and 1978 would be the last time a Lotus driver would win the World Championship before Colin Chapman's death, with the Lotus team slowly declining into mediocrity and dissolution — except for brief success with the young **Ayrton Senna** in the mid-1980s.



Despite their advances, ground effects had a problem, namely that slight miscalculations in set-up would render the ground-effect F1 car undriveable and **wickedly unstable**. The need to keep ground clearances extremely low led to rigidly sprung, rock-hard cars with virtually no ride height tolerance and little if any ability to handle bumps and curbs. Something really terrible, unnatural and unpredictable would happen if the **airflow** beneath the car was disrupted for one reason or another.

“To be honest, there was no such thing as cornering technique in the ground effect era. “Cornering” was a euphemism for rape practised on the driver. . . When you came into a corner you had to hit the accelerator as hard as you possibly could, build up speed as quickly as possible and, when things became unstuck, bite the bullet and give it even more. In a ground effect car, reaching the limit was synonymous with spinning out.”

— *Niki Lauda* —

As Lauda commented, "The **wildest imaginable** things could happen behind the wheel of a ground effect car." After advancing throughout the grid, by 1981-82 all teams were using ground effects. But in an effort to bring more driver control and skill to F1, ground effects — first the skirts (along with six-wheeled and four-wheel drive cars) in 1981, and then underbody venturi tunnels in 1983 — were finally **banned** from Formula One.

With the benefit of hindsight, one can now say confidently that ground effects were less important to the long-run development of F1 technology than **turbocharging** —

although both were introduced initially in the 1977 season, and both eventually banned.



While Lotus were developing the ground-effect principle, **Renault** re-entered Formula One with the turbo RS01, driven by **Jean-Pierre Jabouille**. The first turbo was remarkably quick, although suffering from "turbo lag" under acceleration, but very unreliable, and it would be a year before the Renault finished a Grand Prix. (The 1977 season also saw the introduction of radial tires, first by **Michelin**, then followed by **Goodyear** and **Pirelli**.)

Turbo development was slow, however, and after the Lotus onslaught of 1978, the normally-aspirated Ferrari 312T4, driven by South African **Jody Scheckter**, captured the F1 title in 1979. **Gilles Villeneuve** — described as "perhaps the most tenacious fighter seen in racing for years" — took 2nd place in the World Championship by a slim four points. Renault won the '79 French Grand Prix with Jabouille, while Villeneuve and **René Arnoux** waged a fantastic duel behind, with Villeneuve crossing the line 0.3 seconds ahead.

The turning point came in 1980, a season in which **Alan Jones** and **Team Williams** achieved almost complete domination. While Ferrari had a terrible year, the Scuderia introduced their own turbocharged car at **Imola**, and Renault won at **Interlagos**, Kyalami and the **Österreichring**. (Another highlight of 1980 was the power struggle between **FISA** and **FOCA**, which came to a head with a boycott of the Spanish GP and was resolved only with the first **Concorde Agreement** in 1981.) Although Cosworth-powered teams would win the championship in 1981 and 1982, Grand Prix was increasingly dominated by the turbos from 1981 onwards.



Still, in 1982 there were 11 teams using the Cosworth engine, including (for several races) Brabham, for whom **Nelson Piquet** had won the 1981 championship by one point with a victory at the U.S Grand Prix, held in the parking lot of **Caesars Palace** in Las Vegas. And while the turbos continued to improve, with wins in one-half of 14 races, the 1982 season was dominated by a rift between Villeneuve and **Didier Pironi** at Ferrari that would lead to tragedy for both men. After the **San Marino** Grand Prix, in which Pironi passed Villeneuve, against team orders, while the Ferraris were easily running 1-2 under turbo power, Gilles vowed he would never again speak to his team mate.

“ Gilles has gone, and with him the light of genius in Grand Prix racing. In time, of course, another star will emerge, but it will never twinkle with the same intensity again. We are back to normality once more. The impossible cannot happen.”

Autocourse 1982-83 - Nigel Roebuck

He never did, as two weeks later Villeneuve — affectionately called the "Prince of Destruction" by the *commendatore* Enzo Ferrari — was killed while trying to improve his grid position late in qualifying for the Dutch GP at **Zolder**, in a severe accident in which the Ferrari cartwheeled across the track, nose in the sand, flinging the driver out of the cockpit. Four weeks later **Ricardo Paletti** was killed in his **Osala** at the start of the Canadian GP at Montréal (now named **Circuit Gilles Villeneuve**), and Pironi himself suffered terrible leg injuries in practice for the German GP at Hockenheim two months after that, never to race in F1 again.

The turbo era really began to flower in 1983, when Piquet won his second World Championship by two points — this time using a turbocharged **BMW** powerplant — and McLaren introduced the **TAG-Porsche** engine, driven to four checkered flags by runner-up Prost. (Lotus as well brought out a turbo Renault, piloted by 4th-year driver **Nigel Mansell** to his first podium finish at **Brands Hatch**.) In the 1984 season, with a new MP4/2 car designed by **John Barnard**, McLaren and the TAG turbo won 12 of 16 races and took the constructors' championship with record points. Niki Lauda won five of those to seven for Prost, and won the F1 drivers' title by 1/2 point — the strange total arising because the Monaco GP was halted in a thunderstorm after 31 laps and only half points awarded. (This was also the race, by now legendary, in which **Ayrton Senna**, driving for **Toleman** in his first F1 season, passed Prost on the last lap in the rain, and forever accused the Formula One establishment of stealing the win.)



While many observers felt McLaren's dominance was a one-time fluke, in reality it was a harbinger of things to come. Whether with the TAG or, in 1988, **Honda** turbos, **Ron Dennis'** team dominated the late 1980s like no team before — or since. Prost won the World Championship in 1985 and 1986 (the latter after **Nigel Mansell**, now with Williams, suffered a dramatic rear tire explosion at 180 mph at **Adelaide** in the season's last race). Senna, who joined McLaren after several seasons with Lotus, won the F1 title in 1988, taking the championship deciding race in Japan at **Suzuka**, after stalling on the grid, with an inspired drive to catch and pass Prost and then draw away in the rain.

“With some irony, Senna pointed to the sky each time he passed the line, reminding officials, and anybody else, that in Monaco in 1984 when the situation was the other way round, they had stopped the race. He won it the hard way, juggling his fuel consumption, his lead and the weather perfectly. Ayrton Senna, the boy from Brazil, was World Champion, and he had done it in some style.”

Ayrton Senna: A Tribute - Ivan Rendell

Each of Prost and Senna was eventually to win three drivers' titles with Dennis and Team McLaren. And as a season, 1988 was like no other, with Senna and Prost finishing 1-2, combining for 167 points while winning 15 of the 16 GPs, and McLaren cruising to the constructors' title (shattering 1984's total). Yet it was also the swan song for both



the **turbo era**, as normally aspirated engines were mandated beginning in the 1989 season, and for cooperation between Prost and Senna, as their rivalry would boil over into thinly disguised disdain and dramatic **on-track clashes** in the coming seasons. But while things would be very different *within* Team McLaren and in its Barnard-designed cars as F1 moved toward the 1990s, their almost complete dominance of the series — judged by many fans as boring to watch — would continue into Formula One's 5th decade.

It was in 1987, the sole Williams exception to the string of seven straight McLaren drivers championships from 1984-91 (and the season that witnessed **Piquet's** 3rd World Championship when **Mansell** broke his back in a qualifying crash at **Suzuka**),



that the seeds for the fifth major technical revolution in Formula One were laid. Although their struggle to remain competitive would be doomed, in the '87 season **Team Lotus** unveiled the first F1 car with a computer-controlled "active suspension" system. **Active suspension** — later joined by the semi-automatic gearbox, traction control, "black box" controlled

starting programs and anti-lock brakes — would produce fabulously complex and fast cars, but would also give lie to Niki Lauda's prediction, after ground effects were banned in 1983, that the new rules "create a purer sense of racing for the driver."

At the start of the post-turbo era, McLaren remained supremely dominant, but it's two stars — **Ayrton Senna** and **Alain Prost** — would begin a personal battle that never came to an end. Given their cars' technical superiority, both drivers agreed in 1988 that it made little sense (particularly since they usually qualified 1-2) to fight over the first corner of a race. Yet that gentlemen's agreement was broken at the 1989 **San Marino GP**, where Senna overtook Prost during the restart (after a flaming accident



at **Tamburello** when **Gerhard Berger** hit the wall, a shunt that would have killed the driver a decade before) by taking the racing line from behind. Prost was furious, finding Senna's adversarial approach to racing impossible to deal with, commenting that "I no longer wish to have any business with him. I appreciate honesty and he is not honest."

(Senna, for his part, complained that fighting for the racing line *before* the braking zone was legitimate.)

With the 1989 title on the line at **Suzuka**, the feud came to a head. Prost led by 1.7 seconds at the start, but Senna slowly reeled him in, moving alongside at the **chicane**, putting two wheels on the grass to go for the inside line. As Prost turned in, he held firm — he had given way previously, but not now. Both cars collided and went off. Prost got out of the cockpit in disgust, but Senna insisted on a **push start** from the track marshals, stopped for a new nose in the pits, and passed **Alessandro Nannini** to cross the line first. Yet **FISA** declared Nannini the winner, disqualified Senna (revoking his superlicense as well) and effectively awarded the championship to Prost. Senna remarked, "What we see today is the true manipulation of the World Championship."

The two would do the same thing again in 1990 — different corner, same result — except that Prost by now had moved on to **Ferrari**, no longer content to take a back seat to Senna, and complaining that McLaren was giving preferential treatment in car set-up to the Brazilian. But in 1990, Senna was **leading** the World Championship when the shunt occurred, and many observers feel, to this day, that Senna deliberately drove Prost off the road as a measure of revenge for the prior year. (Senna admitted as much in 1991, without remorse.)

“Some will say, perhaps, that the 1991 World Championship was settled by the events at Montréal or Spa or Estoril, where apparently certain victories gave Nigel Mansell the slip. It was not. In reality, the World Championship was won — and lost — in the first four races, all won by Ayrton Senna. Won, moreover, by a car which should not have been winning.”

Autosport Grand Prix Review '91 - Nigel Roebuck

It was in 1991 that the active era in Formula One truly began, as **Team**



Williams introduced the FW14, designed by **Patrick Head**. As the first F1 car combining a semi-automatic gearbox (originally debuted by Ferrari in 1989) with traction control, the FW14 was revolutionary, but broke the old dictum that "To finish first, first you have to finish." Thus **Senna**, driving a plainly inferior McLaren-Honda MP4/6, after four races had recorded four pole positions and four wins. No one had ever started a Formula One World Championship campaign with four straight victories, and for the rest it was more than demoralizing. With an increase in the points for a win from 9 to 10 (and all races counting for the championship for the first time in F1) Senna had 40 points, his nearest challenger 11, and **Nigel Mansell** of Williams just six.

The Williams began to improve at Monaco, where Mansell took second to Senna, and at the **Canadian GP** on 2 June it looked like Williams were finally ready to make their move. Mansell qualified second, took the lead in the first corner, and ended the penultimate lap with a commanding lead of more than a minute. Waving to the crowd, Mansell turned into the final hairpin, and the engine cut dead, the car coasting to a slow stop, a victim of electronic gremlins. **Nelson Piquet** pushed forward to take the checkered flag for **Benetton** — for what would be his last F1 win. The balance of the 1991 season would see a fruitless quest by Mansell and Williams to catch Senna, including a disqualification while leading at **Estoril** after a wheel fell off in the middle of pit road. Mansell won three in a row in **France, England** and **Germany**, and came into **Suzuka** needing two more victories (and no more than a 4th from Senna) to take the title. But Mansell went off into the sand chasing the Brazilian on lap 10, and **Aryton Senna** had clinched his 3rd Formula One championship in four years.



But Williams got the bugs worked out of their gearbox and, adding traction control and a host of other computer-controlled wonders, ran off a tremendous streak over the 1992-93 seasons. In 1992, **Nigel Mansell** finally rode the Williams wave to the World Championship, winning the first five races and a total of nine overall — breaking Senna's 1988 record — to cruise to the F1 crown. Mansell retired from Williams after

“Mansell enjoyed enormously the best car and had reached the point in his career when he had could exploit it enormously. He seized the 1992 season and held it tight. In the end, the simplicity was all beguiling. After 13 years, after the nightmare of Adelaide in 1986, the pain of Suzuka in 1987 and 1991, Mansell would achieve the World Championship with five races to spare. That simple.”

Grand Prix Showdown - Christopher Hilton

team owner **Frank Williams** announced that he had hired Alain Prost (who took the '92 season off) for 1993, but headed "over the pond" to **IndyCar**, where he won the 1993 **PPG Cup** championship, teaming with **Mario Andretti** (and ironically with victories mainly on the ovals). The prodigal Prost returned to claim his seat — promoting test driver **Damon Hill**, son of Graham and driving number "0," to the second spot at Williams — and in 1993 in turn won his 4th and last World Championship, putting him 2nd on the all-time Formula One list only to Juan Manuel Fangio.



Yet in some respects, 1993 was the end of another era — in fact, of two eras — in Formula One. Again fretting over the perceived absence of driver skill as a delimiter of success, and concerned about the impact a long series of "runaway" seasons on worldwide viewership and sponsor money, **FIA** declared an end to "**driver's aids**," banning active suspension, traction control and other automatic car adjustment mechanisms. While the reaction was typical (recall 1981 and 1983), it was slightly



overdone, as **Ayrton Senna** had put on a spectacular show, once again in an outmatched McLaren MP 4/8, to win five GPs. The most impressive of these, and perhaps the finest victory of his career, was at the **European GP at Donnington Park**, where Senna won after picking up five places in the rain on the first lap, cementing his place in history as the **rainmeister**. (1993 was

also the season in which American **Michael Andretti** tried to master a difficult McLaren without testing and while commuting on the Concorde, crashed in his first four outings, and was sent limping home after a single podium finish.) And so, with a final victory at **Adelaide** in the last race of the 1993 season, Ayrton Senna prepared to move on to Team Williams, at long last striking a \$20 million per-year deal with the team, and owner, who had given him his first test ride in an F1 car more than a decade before.

The beginning of the current era in Formula One is marked by a single day: 1 May 1994. But once again, the roots of the transition reach back further, to the 1991 Belgian GP at Spa, where young German **Michael Schumacher** burst onto the F1 scene by qualifying



7th in his first Formula One start for **Team Jordan**, moving on just one race later to **Benetton**. With the absence of Mansell and the now-retired Prost from F1 for the 1994 season, there was only Schumacher to take on **Ayrton Senna** and make the new F1 cars — running under revised FIA specifications once again,

designed to encourage more competition between drivers rather than between money and computers — a true test of driver mettle.

And new the cars were. After focusing on their active components for years, F1 designers were hard pressed to meet the new specifications, and most of the paddock was not delivered in time for much winter testing before the season's first race at **Interlagos** in Brazil. As Senna prophetically told a pre-season interviewer, "It's going to be a season with lots of accidents, and I'll risk saying that we'll be lucky if something really serious doesn't happen."

Still, everyone expected that the combination of Senna and Williams would make 1994 a cake walk to the World Championship. But in the season's first three races, despite taking three poles, Senna had failed to finish and Schumacher had won each time, putting him 30 points up in the championship as the F1 circus descended on the San Marino GP at **Imola**. There in practice, something really terrible did happen. Two

devastatingly violent accidents — one that killed first-year **Simtek** driver **Roland Ratzenberger** (F1's first death in 12 years) and another that put Brazilian **Rubens Barrichello** in the hospital — shook the faith of the GP fraternity. Williams and Senna, visibly moved and sitting by Barrichello's bedside with tears in his eyes when Barrichello regained consciousness, withdrew from the final qualifying session. Senna telephoned his girlfriend in Lisbon to say he did not want to race on Sunday.



But racing was Senna's life, and he took to the track the next day holding the pole position (his 65th, by far the all-time record) once again. After a starting line shunt and six laps behind the safety car, Senna was in first place just car lengths ahead of Schumacher when, on lap seven, his **Rothmans Williams-Renault** bottomed out in the fast **Tamburello** corner, struck the wall nearly head-on at 180+ mph, and ricocheted back onto the track, a mass of mangled carbon fibre. Senna was motionless in the car, finally being pulled from the wreckage, given first aid and taken away in a helicopter. He died hours later from massive head injuries — caused when a suspension arm from the disintegrating Williams punctured his helmet. Ironically, despite all the tragic Formula One deaths over the decades, Ayrton Senna was still the first and only F1 World Champion to have died during a Grand Prix race.

“Senna was 34, which means that, by F1 standards, he did not die young, just hard and a very long way from home. Senna transcended the tiresome debate about whether race drivers are really athletes because he was something far rarer in this world than an athlete — he was a genius. Senna could take a 1,100-pound F1 car and transform it into a living, breathing thing; a throbbing dance partner in his dangerous pas de deux. Niki Lauda said simply, ‘He was the best driver who ever lived.’”

“The Last Ride” (Sports Illustrated 9 May 1994) - Bruce Newman

In the aftermath of Tamburello, the show went on, as it always has. FIA implemented emergency rules to slow the cars further (with **Max Mosley** brushing aside the requirement of the **Concorde Agreement** that rule changes must be based on unanimity among the F1 teams), mandating pit speed limits, "stepped" bottoms to reduce downforce, limited wing sizes and increased cockpit openings, among others. After a gesture of respect the next race at **Monaco** — where the 1st two grid spaces were left empty and a moment of silence was observed before the green light — **Michael Schumacher** took his first pole position and then marched to back-to-back World Championships in 1994 and 1995, with the latter season seeing a



series of head-to-head duels with **Damon Hill**, Senna's replacement as number one driver at Williams. Schumacher's plain joy at winning the F1 title was itself marred by Senna's loss, as he felt he "measured himself against Ayrton" and the measuring stick was gone.



These twin Schumacher title seasons did restore a measure of excitement to Formula One, and saw a number of firsts, and lasts. **Jean Alesi** — who had battled with Senna as a first-year driver in the streets of Phoenix in 1991 — finally won his first GP at **Canada** in 1995. After first merging with the **Pacific GP** team, **Lotus** then withdrew from F1, the team in bankruptcy and total disarray after nearly a decade as a backmarker. **Nigel Mansell** made an ill-fated return to F1 in 1995, lasting all of three races in a specially designed "fat" McLaren to meet his new girth, but never making an impact despite a final win for Williams during an equally brief stint the next season. And



in 1996, which would see **Damon Hill** at last conquer his own personal demons to capture the World Championship, **Jacques Villeneuve** — son of the legendary Gilles and fresh off an Indy 500 win and IndyCar championship — joined Team Williams as a breath of fresh air. By then, Schumacher had moved on to join

Ferrari for US\$27 million per season, bringing **Maranello** three victories and a resurgence, with the **Tifosi** rejoicing after Ferrari's first victory in the Italian Grand Prix at Monza in nearly a decade (since **Gerhard Berger's** 1998 win). With that, the transition from the Senna-dominated era of the late '80s and early '90s seemed almost poetically complete, with the stage set for today's "new lions" of F1 to roar.

Once again demonstrating that change is the essence of Formula One, today's F1 drivers are fashioning the stuff from which legends are made. From Villeneuve to **Mika Hakkinen** and former Irish bad boy **Eddie Irvine** (together with Giancarlo Fisichella, Ralf Schumacher and Alexander Wurz) these new lions are talented, well-paid and — in light of the savage commercialization of today's F1 — brave in an entirely new way as well.

Not that controversy and politics have been eliminated, however. They actually began in earnest again in 1994, where Michael Schumacher was stupidly shown the **black flag** at Silverstone for "overtaking" on the pre-race **parade lap**, and then slapped by FIA with a two-race suspension for allegedly ignoring the flag while Benetton's Flavio Briatore argued with the stewards. The shenanigans escalated at the **Hungaroring** that season, where Schumacher was disqualified on technical grounds after the wooden undertray plank on his Benetton was judged too thin under the regulations.



They peaked at **Adelaide** — the last gasp for a fun-filled Australian GP F1 venue — where Damon Hill, second in the race and the world championship, desperately dove for a small gap and Schumacher shut the door, breaking the Williams' front wishbone and securing the win and season title. And controversy

continued into 1995, where Hill, superficially appearing confident in the superior Williams FW17 of **Patrick Head**, collided into Schumacher at **Silverstone**, spun out while leading at Hockenheim, and made a general mess of things as Schumacher handily won his second title. (This included a fantastic victory in the 1995 **European GP** at a refurbished Nürburgring, where "Schumi" adroitly managed rain tyres and pit strategy to pass **Jean Alesi** with three laps to go to take the win, while Hill crashed once again attempting to catch the German.)

Emulating the fabled Senna-Prost duels of 1989-90, the 1996-98 F1 seasons featured an odd combination of tremendous on-track racing and sometimes unbelievable off-track wrangling. During the winter, **Frank Williams** had abruptly doffed Coulthard for the young Jacques Villeneuve, who immediately proved mature beyond his years by outpacing Hill in the season-opening 1996 Grand Prix at Melbourne's **Albert Park**, eventually succumbing to an oil leak that forced him to accept the second step on the podium. Damon won his championship, but in turn was fired by Williams, whence he moved to a **Tom Walkinshaw** managed TWR Arrows team that has still not managed to become competitive. Meanwhile, Villeneuve managed his own share of controversy in winning the 1997 World Championship. Driving the last of the **Adrian Newey** designed Williams cars (the FW19), Jacques bleached his hair blond and captured the pole in the season-opening GP, but was shunted into the gravel at the first corner by the Ferrari of **Eddie Irvine**. Thereafter, despite occasionally erratic driving, he posted some of the best statistics ever for a second-year F1 driver, with 10 poles, 7 wins, 3 fastest laps and 86 points in 16 races.

“ Villeneuve is a bundle of contradictions. Hugely talented, there are times when he seems to have cultivated the role of F1's most conspicuous dissident, a blond-tinted, high-grunge *enfant terrible* who marches to his own beat, no matter whether it makes his team uneasy or leaves him vulnerable to sanctions from officialdom.”

Autocourse 1997-98 - Alan Henry

As is becoming typical, there was major controversy, as well, with Villeneuve being disqualified at **Suzuka** for failing to slow down under a waived yellow flag in practice (running the race under appeal). This followed a seesaw mid-season battle with Schumacher in which Michael put the Ferrari 14 points in the lead with consecutive victories at **Montreal** and **Magny-Cours**, while Jacques was reprimanded by FIA — and summoned to appear personally in Paris the Wednesday before his home Grand Prix — after criticizing proposals for 1998 rule changes (grooved tires, narrowed monocoques, etc.) again designed to slow the cars. The



perhaps inevitable result was a first-lap Jacques shunt into the wall on the pit straight chicane while leading the race at **Circuit Gilles Villeneuve**. The Canadian press responded that "by calling such an ill-timed meeting, FIA president **Max Mosley** emerges from the affair covered in infamy and looking for all the world like a petty tyrant on a power trip." For his part, maverick Villeneuve was nonplused, remarking that "I haven't been asked to change my views, just my language" (he reportedly called the new rules "shit").

The 1997 F1 season also saw the entry into Formula One of Jackie Stewart's new **Stewart Racing** team, backed by Ford, and a splendid second-place finish



by Rubens Barrichello for Stewart in the rain at Monaco. **Team Tyrrell** introduced the ugly and controversial "**X-Wings**" — sidepod-mounted winglets — that would eventually be banned in 1998. But the big story of '97 was how changed rules led to changed tactics that fundamentally altered the sport.

With **refueling** introduced as a measure to add drama, F1 enthusiasts complained that Grand Prix racing had become an overly esoteric technical exercise with **overtaking** on most circuits the product of pit stop strategies rather than passing cars on the track itself. Undoubtedly the master at this new craft was Schumacher, whose tactical genius at Benetton extended to Ferrari, using tremendously quick "in laps" that allowed him to pass faster cars in the pits.

Yet the end of the 1997 season would become a prelude to a splendid 1998 F1 championship. Moving into the penultimate race at **Suzuka**, Villeneuve held a nine-point advantage, but his DQ and Ferrari's timely win put Schumacher in the points lead by one. So it all came down to the European GP, this time returning to Spain's **Jerez**, where high drama was in order. Villeneuve qualified on pole with Schumacher alongside, posting the exact same time (and placed second only since his hot lap was later in the session). On lap 48, 20 tours from the finish, Villeneuve moved to overtake Schumacher for the lead, and Schumi turned in to the Williams' left-hand sidepod as the

“Schumacher remains the most complete driver in F1 today. Apart from the dazzling car control, Michael rules his Italian team with a psychological rod of iron, taking as much responsibility for technical decisions as he does for capitalizing on them during the race. . . . Jackie Stewart believes that the man who eventually eclipses Schumacher is not yet even in F1. He could be right.”

Autocourse 1997-98 - Alan Henry

Canadian dived inside. The move was widely perceived as a re-run of the controversial Schumacher-Hill accident at Adelaide in 1994 — which Schumacher has consistently denied was deliberate — but this time ended up with the Ferrari stranded in the **gravel trap** and Villeneuve coasting to an easy third-place and the World Championship title. Schumacher this time, moreover, was brought before the FIA, stripped of his second-place in the driver's championship, and **transformed** among many Formula One fans from Saint in the making to Satan incarnate. More importantly, perhaps, the Ferrari team for which manager **Jean Todt** had brought Schumacher on as its salvation in 1996 faced the prospects of another hard winter and yet another season in the many long years since Jody Scheckter, the last prancing horse World Champion, captured the title in 1979.

Discarding their long-lived orange and white livery when Marlboro withdrew from Formula One, McLaren International returned to F1's roots with new silver **West** cars powered by Mercedes, hearkening to the "**Silver Arrows**" driven by Fangio and Moss in the 1950s. This time, the drivers were Hakkinen — who had taken Michael Andretti's seat and survived a massive head injury during a high-speed crash at Adelaide in 1995 — and Coulthard. The Scot won the opening race of the 1996 season, and with characteristic **sportsmanship** gave way to permit the Finn to win his first GP in the finale at Jerez. Would Hakkinen's victory, like Alesi's 1995 Canadian GP win, be a one-hit wonder? The 1998 Grand Prix season would answer with a resounding "No."



In fact, despite initially looking like a McLaren romp, Formula One '98 proved to be the most exciting F1 season in years. Despite the rule changes and grooved tires (supplied by both Goodyear and **Bridgestone**) the cars once again were faster, and overtaking just as difficult. Then Hakkinen's dominant MP 4/13 McLaren won four of the first six races, including opening 1-2 finishes with Coulthard in Melbourne and Interlagos. But Schumacher split the McLarens on the **Buenos Aires** grid, and outfoxed Coulthard into making a mistake to capture the Argentine GP. After Hakkinen's victory at **Monaco** left him 22 points in the drivers championship lead, it looked like Ferrari were doomed to another season of disappointment and F1 fans resigned themselves to a McLaren cruise to the crown.

But Schumacher fought back fiercely, driving his Maranello team to improve the car, winning (as in 1997) back-to-back in **Canada** and **France**, then adding the British GP to move within two points going into the ninth race at the Austrian **A-1 Ring**. There, Schumacher first showed signs of being human, pressing too hard at the start on a light fuel load and ploughing through the gravel at high speed, eventually finishing third. By the time the F1 circus moved on to **Spa-Francorchamps**, Schumi was again seven



points down and hanging on just barely to Hakkinen in the title battle. Belgium indeed proved the turning point of the season — with another controversial race — where a massive 13-car shunt at the **La Source** hairpin, initiated by Coulthard, put many cars out of action at the first corner. On the restart, Hakkinen then spun and destroyed his McLaren when hit by Johnny Herbert's **Sauber-Petronas**. In atrocious rain, Schumacher opened up a massive lead, but then reamed a slow-moving Coulthard from behind in the spray, wiping off the Ferrari's entire right-side suspension and wheel. Incensed, Schumacher raced down pit lane to have it out with "DC," but was pushed away by the mechanics. Eventually, Damon Hill went by to give **Team Jordan** its first GP victory.

Despite a Schumacher win at **Monza** to tie the World Championship, Hakkinen rose to the occasion. Under intense pressure, Mika won the **Luxembourg GP** at the Nürburgring, outpacing Schumacher's pole with a pass in the pits, taking a four-point lead to the finale at **Suzuka**. With the F1 press all talking about the two previous Schumacher final-race incidents (Hill and Villeneuve), the German captured the pole, but stalled on the grid and was forced to start from last position. Schumacher knifed

“ After eight hard years with Team McLaren, Mika Hakkinen had come back from his huge shunt at Adelaide to take the Championship in a flat fight with the acknowledged giant of the sport. . . . But for Schumacher and Ferrari, there was no disguising the fact that a season's worth of hard work had clunked to a halt on the Suzuka grid. The long climb towards the elusive title would now start all over again — more like Sisyphus than Hercules — and there would be little rest. ”

FOSA F1 99 - George Goad

through the field, yet on lap 32, Ferrari's title ambitions ended not in a whimper, but the bang of an exploding **Goodyear** tyre. Hakkinen took the title in style — a deserved World Championship who outqualified Ayrton Senna in his first race for McLaren in 1993, cheated death in the 1995 Adelaide crash that ended with a broken neck, won his first race in 1997, and now stands on the top podium of the world.

That left 1999 as the 50th anniversary season of the modern formula one era and the end of the first century (and first millennium) of Grand Prix racing. Another classic. With **Alex Zanardi** returning to F1 from CART racing in the U.S., where he had scored impressive back-to-back championships, many expected a Williams revival and another riveting Schumacher-Hakkinen duel. But instead, Zanardi never got the feel for

the twitchy, grooved-tired modern F1 car and languished at the back of the grid all season, with **Ralf Schumacher** taking the team lead and scoring well for Frank Williams. Team Stewart had a great engine and a good car, earning **Johnny Herbert** his third win, and Jacques Villeneuve led a massively funded **British**



American Racing (BAR) team, using a modified Reynard chassis that has dominated American IndyCar racing, to a disappointing points-less finish. The "other" Schumacher, Michael that is, shunted out for nearly the entire season at Silverstone, breaking his legs after a full wheel lock crash straight into the tire barrier. His Ferrari team mate **Eddie Irvine** took up the slack well, winning four races and finishing 98% of all laps in the season, an incredible display of reliability and consistency. But after losing concentration, making some bad offs and weeping emotionally after a self-inflicted spin out of the lead at **Monza**, Mika Hakkinen won the season-final GP in Suzuka to capture his second consecutive drivers' title by a slim two points.

While many observers felt that the 2000 Formula One season would see a resurgence among the backmarkers, particularly the new **Team Jaguar**, rising from Ford's purchase of Stewart, it was hardly so. McLaren and Ferrari continued their dominance, together winning every race, nine by **Michael Schumacher** alone. With early-season reliability problems for Mika Hakkinen and a late-season charge by Schumacher, the German convincingly captured the World Championship at the penultimate **United States Grand Prix at Indianapolis** — returning to F1 after a gap of nine years — with his emotional reaction broadcast over the pit radio for the world to enjoy. It was Maranello's first F1 championship in more than 20 years, making good, at long last, on **Jean Todt's** bold and expensive bet on the German phenomenon. And with his victory at Monza, Schumacher tied the legendary Ayrton Senna for second place among all drivers in career victories (eventually finishing the season with 44), weeping with joy during the post-race press conference as the magnitude of his accomplishment set in.

And so as the 2001 season begins, these new lions — joined by returning tyre manufacturer **Michelin** and another former CART champion for Williams, **Juan Pablo Montoya** — will battle again for the most elusive prize in motor racing. And their exploits, successes and failures will be recorded in statistics, for later generations to view with wonder and some nostalgia. But that has always been the way of Formula One history.